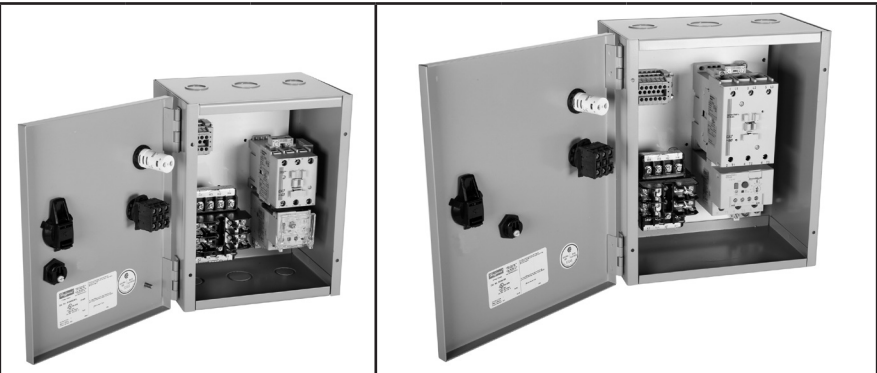


### Type 1 General Purpose Enclosures ②③

#### Enclosure (Box) Kit Includes:

- Hinged cover
- Backpan pre-drilled for listed arrangements (not tapped)
- (2) Ground Lugs and Symbol label
- (2) 22mm knockouts for pilot devices ④
- CEP7-ERA Overload Reset Adapter
- MR7 Reset Kit for Cover
- (2) 22mm knockouts for Reset ⑤
- Dual Conduit knockouts - Top and Bottom
- "A" Box - (2) 1/2 to 3/4" and (1) 3/4 to 1"
- "B" Box - (2) 1/2 to 3/4", (1) 1 to 1-1/4", (1) 3/4 to 1"
- (4) 8-32 x 1/2" screws for mounting controllers
- "B" Box also includes (2) 10-32 x 3/4" screws
- Does not include wire



"A" Box Kit

"B" Box Kit

Catalog Number	Price	Catalog Number	Price
M1-1086-A	118.55	M1-12106-B	148.19

Optional: 35mm DIN Rail Kit with (2) 10-32 x 1/4" screws ②	Catalog Number	Price	Catalog Number	Price
SF-2 (2 inches long)	8.18	SF-3 (3 inches long)	10.22	

Dimensions ⑥	10" x 8" x 6" Type 1 Enclosure	12" x 10" x 6" Type 1 Enclosure
--------------	--------------------------------	---------------------------------





For use with Controller	For use with overload			"A" Box Kit accommodates			"B" Box Kit accommodates			
	CEP7-ED1*	CEP7-EE*	CT7N	Use with No CPT	Use with 50VA CPT ③	Space for 2" DIN Rail ②	Use with No CPT	Use with 50VA CPT	Use with 100VA CPT ③	Space for 3" DIN Rail ②

Non-reversing Contactors											
CA7-9...55	~	~	~	✓	✓	✓	✓	✓	✓	✓	✓
CA7-60...97 ⑦	~	~	~	No	No	No	✓	N/A	✓	✓	✓
Reversing Contactors											
CAU7-9...37	~	~	~	✓	No	✓	✓	✓	✓	✓	✓
CAU7-43...55	~	~	~	No	No	No	✓	✓	✓	✓	✓
CAU7-60...97 ⑦	~	~	~	No	No	No	No	N/A	No	No	No
Non-Reversing Starters											
CAT7-9...23	✓	✓	①	✓	✓	✓	✓	✓	✓	✓	✓
CAT7-30...55	✓	✓	①	✓	✓	✓	✓	✓	✓	✓	✓
CAT7-60...97 ⑦	N/A	✓	①	No	No	No	✓	N/A	✓	✓	✓
Reversing Starters											
CAU7-9...23	✓	✓	①	✓	No	✓	✓	✓	✓	✓	✓
CAU7-30...37	✓	✓	①	✓	No	✓	✓	✓	✓	✓	✓
CAU7-43...55	✓	✓	①	No	No	No	✓	✓	✓	✓	✓
CAU7-60...97 ⑦	N/A	No	No	No	No	No	No	No	No	No	No
NEMA Sized Non-reversing Starters											
CATN7-12...16	✓	✓	①	✓	✓	✓	✓	✓	✓	✓	✓
CATN7-37	✓	✓	①	✓	✓	✓	✓	✓	✓	✓	✓
CATN7-43	✓	✓	①	✓	✓	✓	✓	✓	✓	✓	✓
CATN7-85	N/A	✓	①	No	No	No	✓	N/A	✓	✓	✓

- ① Alternatively CT7N overload relay can be used which will require CT7N-RA3 Reset Adapter. Not included in the kit. Order separately.
- ② 2" DIN rail can accommodate up to (3) V7-W4 TB's or equivalent DIN rail mount timers, relays, etc. Order kit SF-2 separately.  
3" DIN rail can accommodate up to (6) V7-W4 TB's or equivalent DIN rail mount timers, relays, etc. Order kit SF-3 separately.
- ③ Enclosure designed for use with CPT with top mount secondary fuse, plus back pan mounted Ambus Fuseholder with (2) primary fuses. A CPT and the addition of extra terminal blocks or other control relay using the 2" DIN rail space may require a design change.

- ④ This enclosure is designed for use with a D7 multi-function Start/Stop as standard plus a D7D monolithic pilot light to fit the (2) 22mm knockouts provided. Additional pilot device holes will require field drilling and may interfere with the controller or the addition of a CPT or TB's.
- ⑤ (2) 22mm knockout locations are provided for one reset Kit to be located contingent on the type of controller used. See box Instruction sheet for mounting details of controller and reset kit.
- ⑥ For enclosure dimensions see page C122
- ⑦ CA7-97 and CAT7-97 will not fit in "B" Box because of wire bending space requirements. See Selection tables for box sizes starting on page C122 for dimensions.

**Pilot Device Kits – All applications (except Kwikstarters and Explosion Proof enclosures) ❶**

Kits	Description	Contact Blocks included		For Use With Enclosure...	Catalog Number	Price
		NO	NC			
	<b>Multi-Function Pushbutton kit ❷</b> <b>START-STOP</b> Non-illuminated, Standard for “A” and “B” Box Kits.	1	1	Type 1, 12, 3R, 4, 4X, 13	SS6-D7P	54.17
				Type 1, 12, 3R, 4, 13	SS6-D7M	57.23
	<b>Multi-Function Pushbutton kit ❷</b> <b>FORWARD-STOP-REVERSE</b> Non-illuminated, Standard for “A” and “B” Box Kits.	2	3	Type 1, 12, 3R, 4, 4X, 13	SS5-D7P	102.2
				Type 1, 12, 3R, 4, 13	SS5-D7M	107.31
	<b>STOP and START</b> Two button pushbutton kit	1	1	Type 1, 12, 3R, 4, 4X, 13	SS1-D7P	63.36
				Type 1, 12, 3R, 4, 13	SS1-D7M	67.45
	<b>FORWARD, REVERSE and STOP</b> Three button pushbutton kit	2	3	Type 1, 12, 3R, 4, 4X, 13	SS7-D7P	117.53
				Type 1, 12, 3R, 4, 13	SS7-D7M	123.66
	<b>HAND-OFF-AUTO selector switch kit</b> Name plate included.	2	0	Type 1, 12, 3R, 4, 4X, 13	SS2-D7P	53.14
				Type 1, 12, 3R, 4, 13	SS2-D7M	55.19
	<b>FWD-OFF-REV selector switch kit</b> Name plate included.	2	0	Type 1, 12, 3R, 4, 4X, 13	SS9-D7P	53.14
				Type 1, 12, 3R, 4, 13	SS9-D7M	55.19
	<b>OFF-ON selector switch kit</b> Name plate included.	1	0	Type 1, 12, 3R, 4, 4X, 13	SS4-D7P	40.88
				Type 1, 12, 3R, 4, 13	SS4-D7M	42.92
	<b>Monolithic Pilot Light kit</b> LED Lamp and lens cap Does not include nameplate	~	Type 1, 12, 3R, 4, 4X, 13	Green LED 24V AC/DC	D7D-P3N3	See Page H63
				Red LED 24V AC/DC	D7D-P4N3	
				Green LED 120V AC	D7D-P3N5	
				Red LED 120V AC	D7D-P4N5	
				Green LED 240V AC	D7D-P3N7	
				Red LED 240V AC	D7D-P4N7	

**Starters & Enclosed Products**



Example of pushbutton kits on an “A” Box

❶ Pilot Device Kits do not include control wires. See instruction sheet for installation.  
 ❷ Multi-function START/STOP pushbutton are standard for General Purpose Type 1(M1) dimensions A and B enclosures.

#### A.C. Coil Codes & Voltage Ranges ①⑤

All catalog numbers, list prices and enclosure dimensions in the previous section reflect contactors with AC coils. If necessary, add the appropriate price adder to the list price for each coil required as shown in the online catalog. Remember that reversing applications require two coils. Price Adder x 2.

A.C. Coil Codes (Replace “*” in cat.# with coil code)	CA7-9 thru CA7-97 CAN7-12...85	
	50 Hz	60 Hz
24		
24Z <sup>ⓧ</sup>	24V	24V
110	~	~
120 <sup>ⓧ</sup>	110V	120V
120B	~	~
208	~	208V
208W	~	~
220W <sup>②</sup> <sup>ⓧ</sup>	200-220V	208-240V
240	220V	240V
240B	~	~
240W	~	~
277	240V	277V
380	380-400V	440V
440W	~	~
460W	~	~
480 <sup>ⓧ</sup>	440V	480V
575	~	~
600 <sup>ⓧ</sup>	550V	600V
Price Adder	~	~

#### D.C. Coil Codes & Voltage Ranges ①⑤

For starters with DC coils, select Coil Code from the table below. Remember that reversing applications require two coils (Price Adder x 2). Starter catalog numbers must be modified when using DC coils. For example: For **CAT7-9...55** contactors, add an “E” to catalog number for Electronic DC Coils. i.e.: CAT7-9... becomes CAT7-9E... For **CAT7-60...97** contactors, add a “D” to catalog number. i.e.: CAT7-60... becomes CAT7-60D...

D.C. Coil Codes (Replace “*” in cat.# with coil code)	③	⑥	④
	CA7-9E...37E CAN7-12E...37E	CA7-43E...55E CAN7-43E	CA7-60D...97D CAN7-85D
CA7 Code	Voltage	Voltage	Voltage
12E	12VDCE	12VDCE	~
24E <sup>ⓧ</sup>	24VDCE	24VDCE	~
24DD	~	~	24VDC
36E	36-48VDCE	36-48VDCE	~
48E	48-72VDCE	48-72VDCE	~
48DD	~	~	48VDC
110E	110VDCE	110VDCE	~
110DD	~	~	110VDC
~	~	~	~
125DD	~	~	125VDC
220E	220VDCE	220VDCE	~
220DD	~	~	220VDC
250DD	~	~	250VDC
Price Adder ⑤	49.06	99.13	123.16

#### CAT9 AC/DC Coil Codes and Voltage Ranges ②③⑤

Electronic Coils	V	24-60V	48-130V	100-250V	250-500V	Price Adder for PLC option
		(Replace “*” in cat.# with coil code)				
CA9-116...370	AC/DC	24W	48W	120W	480W	~
CA9-116-EI...370-EI	AC/DC with PLC Input	~	~	120W	480W	51.10
CA9-400-EI...750-EI		24W <sup>⑦</sup>	48W	120W	480W	~
CA9-860-EI...1060-EI		~	~	120W	~	~
CA9-1260-EI		24W <sup>⑦</sup>	48W	120W	480W	~
CA9-2050-EI...2650-EI		~	~	120W	~	~

① Only the most common coils are shown here. Other coil voltages may be available. Refer to Contactor Renewal Parts in Section A of this catalog, or contact your nearest Sprecher + Schuh sales office.

② Wide range coil.

③ “-EI” designates contactor coil with PLC input. Selections CA9-116...370 with “EI” requires use of control logic on terminals 1, 2, 3. CA9-400 contactors and larger include an integral switch to select use of “EI”.

④ “DD” coils are standard for CA7-60D...97D.

⑤ Reversing applications require two coils. Add appropriate price adder(s) to list price of enclosed contactors and starters. Remember to add price for each coil required.

⑥ CA7-9E...55E electronic coils are not interchangeable with non-electronic DC or AC coils.

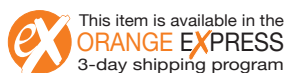
⑦ This coil range is 24-60V DC only.

### CA7 Contactor with CEP7 Overload Relay ①③④ ex

For use with contactor...	Amp Range	Overload Relay Code (◆)	Catalog Number (of Overload Relay)	Price Adder
<b>3-Phase / Manual Reset / Class 10</b>				
CA7-9...CA7-23	0.1...0.5	D1AB	CEP7-ED1AB	Standard
	0.2...1.0	D1BB	CEP7-ED1BB	Standard
	1.0...5.0	D1CB	CEP7-ED1CB	Standard
	3.2...16	D1DB	CEP7-ED1DB	Standard
	5.4...27	D1EB	CEP7-ED1EB	Standard
CA7-30...CA7-55	1.0...5.0	D1CD	CEP7-ED1CD	Standard
	3.6...16	D1DD	CEP7-ED1DD	Standard
	5.4...27	D1ED	CEP7-ED1ED	Standard
	9...45	D1FD	CEP7-ED1FD	Standard
<b>3-Phase / Auto or Manual / Adjustable Trip Class 10, 15, 20 &amp; 30</b>				
CA7-9...CA7-23	0.1...0.5	EAB	CEP7-EEAB	17.37
	0.2...1.0	EBB	CEP7-EEBB	17.37
	1.0...5.0	ECB	CEP7-EECB	17.37
	3.2...16	EDB	CEP7-EEDB	17.37
	5.4...27	EEB	CEP7-EEEB	17.37
CA7-30...CA7-55	1.0...5.0	ECD	CEP7-EECD	21.46
	3.2...16	EDD	CEP7-EEDD	21.46
	5.4...27	EED	CEP7-EEED	21.46
	9...45	EFD	CEP7-EEFD	21.46
CA7-55	11...55	EQD	CEP7-EEQD	Standard
CA7-60...CA7-97	5.4...27	EEE	CEP7-EEEE	Standard
	9...45	EFE	CEP7-EEFE	Standard
	18...90	EGE	CEP7-EEGE	Standard
	60...120	EVE	CEP7-EEVE	Standard

### CB7 Contactor with CEP7 Overload Relay

For use with contactor...	Amp Range	Overload Relay Code (◆)	Catalog Number (of Overload Relay)	Price Adder
<b>1-Phase / Automatic or Manual Reset / Class 10</b>				
CA7-9...CA7-23	1.0...5.0	EPB	CEP7S-EEPB	Standard
	3.2...16	ERB	CEP7S-EERB	Standard
	5.4...27	ESB	CEP7S-EESB	Standard
CA7-30...CA7-43	9...45	ETD	CEP7S-EETD	Standard
CA7-60...CA7-97	18...90	EUE	CEP7S-EEUE	Standard



- ① 3-phase CEP7 units are only designed for 3Ø applications. Single phase CEP7S units are only designed for 1Ø applications.
- ② This reference is not intended to be a guide for selecting contactors. Size overload relays using the full load current of the motor.
- ③ The reset time of a CEP7 set in the automatic mode is approximately 180 seconds.
- ④ CEP7 Overload relays do not work with Variable Frequency Drives or any Sprecher + Schuh Softstarter with braking options.

### Large Amp CEP7 Solid State Overload Relays, Automatic or Manual Adjustable Trip Class ①②③④

Directly Mounts to Contactor... ②	Adj. Range (A)	Overload Relay Code (◆)	CT Ratio	Catalog Number (of Overload Relay)	Price Adder
<b>Automatic or Manual Reset for 3-Phase Applications Adjustable Trip Class 10, 15, 20 &amp; 30</b>					
CA9-116...146	30...150	EHJ	150:5	CEP7-EEHJ	Standard
CA9-190...205	40...200	EJJ	200:5	CEP7-EEJJ	Standard
CA9-265...305		CT3	300:5	⑤	Standard
CA9-370...580		CT6	600:5	⑤	Standard
CA9-750...1060		~		Refer to Factory	Standard

#### Special Notes:

**Wye-Delta Starters** - First multiply motor full load current by 58%. Then, using this figure, select appropriate Overload Relay Code from tables above.

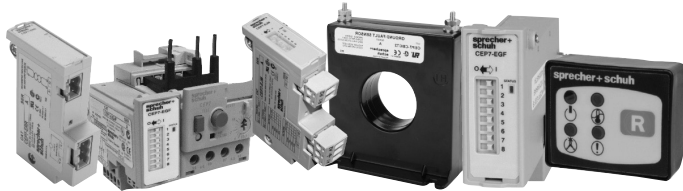
**Part Winding Starters** - First multiply motor full load current by 50%. Then, using this figure, select appropriate Overload Relay Code from tables above.

**Variable Frequency Drives** - CEP7 solid state overload relays cannot be utilized on VFDs or Softstarters with Braking option.

**C** Starter Modification Codes

#### Intelli-button Reset Kit Factory Modification

The CEP7-ERID Intelli-button plus your choice of side-mounted module can be ordered as a factory modification, installed in any control panel built by Sprecher + Schuh that contains a CEP7-EE\_ overload relay. Just add the kit suffix shown below to the end of the starter catalog number. For example, CAT7-9-120-EEB-G0 becomes CAT7-9-120-EEB-G0-IB2



CEP7-ERID + Side Mount Module...	Add to end of Catalog Number	Kit includes...	Price Adder
Remote Reset Only	-IB1	CEP7-ERID CEP7-ERR	207.47
Jam and Remote Reset	-IB2	CEP7-ERID CEP7-EJM (B)	217.69
Thermistor Relay and Remote Reset	-IB3	CEP7-ERID CEP7-EPT	234.04
Ground Fault and Remote Reset	-IB4	CEP7-ERID CEP7-EGF CEP7-CBCT1 (45A)	269.81
	-IB5	CEP7-ERID CEP7-EGF CEP7-CBCT2 (90A)	399.60
	-IB6	CEP7-ERID CEP7-EGF CEP7-CBCT3 (180A)	452.75
	-IB7	CEP7-ERID CEP7-EGF CEP7-CBCT4 (420A)	516.11
Ground Fault and Jam and Remote Reset Module	-IB8	CEP7-ERID CEP7-EGJ CEP7-CBCT1 (45A)	306.60
	-IB9	CEP7-ERID CEP7-EGJ CEP7-CBCT2 (90A)	436.39
	-IB10	CEP7-ERID CEP7-EGJ CEP7-CBCT3 (180A)	489.54
	-IB11	CEP7-ERID CEP7-EGJ CEP7-CBCT4 (420A)	552.90

#### CA7 Starters with optional CT7N Bimetallic Overload Relay ①

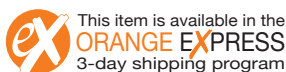
Directly Mounts to Contactor...	Amp Range	Overload Relay Code (◆)	Catalog Number (of Overload Relay used)	Price Adder
CA7-9... CA7-23 Frame "A"	0.10...0.16	AA16	CT7N-23-A16	4.09
	0.16...0.25	AA25	CT7N-23-A25	
	0.25...0.40	AA40	CT7N-23-A40	
	0.35...0.50	AA50	CT7N-23-A50	
	0.45...0.63	AA63	CT7N-23-A63	
	0.55...0.80	AA80	CT7N-23-A80	
	0.75...1.0	AB10	CT7N-23-B10	
	0.90...1.3	AB13	CT7N-23-B13	
	1.1...1.6	AB16	CT7N-23-B16	
	1.4...2.0	AB20	CT7N-23-B20	
	1.8...2.5	AB25	CT7N-23-B25	
	2.3...3.2	AB32	CT7N-23-B32	
	2.9...4.0	AB40	CT7N-23-B40	
	3.5...4.8	AB48	CT7N-23-B48	
	4.5...6.3	AB63	CT7N-23-B63	
	5.5...7.5	AB75	CT7N-23-B75	
	7.2...10	AC10	CT7N-23-C10	
	9.0...12.5	AC12	CT7N-23-C12	
	11.3...16	AC16	CT7N-23-C16	
	15...20	AC20	CT7N-23-C20	
	17.5...21.5	AC21	CT7N-23-C21	
21...25	AC25	CT7N-23-C25		
CA7-30... CA7-37 Frame "B"	15...20	BC20	CT7N-37-C20	8.18
	17.5...21.5	BC21	CT7N-37-C21	
	21...25	BC25	CT7N-37-C25	
	24.5...30	BC30	CT7N-37-C30	
	29...36	BC36	CT7N-37-C36	
CA7-43...55 Frame "C"	33...38	BC38	CT7N-37-C38	8.18
	17...25	CC25	CT7N-43-C25	
	24.5...36	CC36	CT7N-43-C36	
CA7-60... CA7-97 Frame "D"	35...47	CC47	CT7N-43-C47	8.18
	35...47	CC47	CT7N-55-C60	
	45...60	CC60	CT7N-55-C60	
CA7-60... CA7-97 Frame "D"	35...47	DC47	CT7N-85-C47	16.35
	45...60	DC60	CT7N-85-C60	
	58...75	DC75	CT7N-85-C75	
	72...90	DC90	CT7N-85-C90	
	85...97	DC97	CT7N-97-C97	

#### Special Notes:

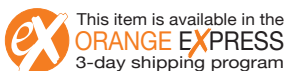
**Wye-Delta Starters** - First multiply motor full load current by 58%. Then, using this figure, select appropriate Overload Relay Code from tables above.

**Part Winding Starters** - First multiply motor full load current by 50%. Then, using this figure, select appropriate Overload Relay Code from tables above.

① Separately mounted overload is available. See Section B.



Modifications or Special Feature ②	Change Last Digit (0) in Catalog Number To:	Enclosure Type		
		Type 1 General Purpose	Type 3R/4/4X/12	Type 7/9 Explosion Proof
<b>Pilot Devices In Cover or Flange</b>				
"Start-Stop" Pushbutton ❸	3			
"On-Off" Pushbutton ❸	4	96.07	219.73	396.54
"Emergency Stop" Pushbutton - Twist to Release ③	9			
"Hand-Auto" Selector Switch	5			
"Off-On" Selector Switch	6	96.07	219.73	396.54
"Hand-Off-Auto" Selector Switch ❸	7			
Pilot Light Only ❶ ❸	1	152.28	152.28	333.17
Pilot Lights Only (2) ❶ ❸	2	296.38	296.38	623.46
Pilot light w/ "Start-Stop" Pushbutton ❶ ❸	13	248.35	372.01	718.47
Pilot Light w/ "On-Off" Pushbutton ❶ ❸	14			
Pilot Light w/ "Hand-Auto" Selector Switch ❶	15			
Pilot Light w/ "Off-On" Selector Switch ❶	16	248.35	400.62	718.47
Pilot Light w/ "Hand-Off-Auto" Selector Switch ❶	17			
Reversing "For-Stop-Rev" - Pushbutton ❸	3			
"Up-Stop-Down" Pushbutton	4			
"Open-Stop-Close" Pushbutton	5	248.35	400.62	718.47
Multi-Speed "High-Stop-Low" Pushbutton	3			
"Fast-Stop-Slow" Pushbutton	4			
Reversing "For-Off-Rev" Selector Switch ❸	6			
"Up-Off-Down" Selector Switch	7			
"Open-Off-Close" Selector Switch	8	218.73	219.73	396.54
Multi-Speed "High-Off-Low" Selector Switch	5			
"Fast-Off-Slow" Selector Switch	6			
Reversing Pilot Lights (2) w/ "For-Stop-Rev" Pushbutton ❶ ❸	23			
Pilot Lights (2) w/ "Up-Stop-Down" Pushbutton ❶	24			
Pilot Lights (2) w/ "Open-Stop-Close Pushbutton ❶	25	543.70	695.98	1,343.93
Multi-Speed Pilot Lights (2) w/ "High-Stop-Low" Pushbutton ❶	23			
Pilot Lights (2) w/ "Fast-Stop-Slow" Pushbutton ❶	24			
Reversing Pilot Lights (2) w/ "For-Off-Rev" Selector Switch ❶ ❸	26			
Pilot Lights (2) w/ "Up-Off-Down" Selector Switch ❶	27			
Pilot Lights (2) w/ "Open-Off-Close Selector Switch ❶	28	515.09	515.09	1,022.00
Multi-Speed Pilot Lights (2) w/ "High-Off-Low" Selector Switch ❶	25			
Pilot Lights (2) w/ "Fast-Off-Slow" Selector Switch ❶	26			











This item is available in the **ORANGE EXPRESS** 3-day shipping program

**Ordering Instructions**

Change base **Catalog Number** according to instructions at top of column 2.  
Example: To Add a "Start-Stop" Pushbutton: change **CAT7-30-\***-◆-G0 to **CAT7-30-\***-◆-G3

- ❶ Pilot Lights may be applied with 24VAC/DC, 120VAC or 240VAC control circuit. Pilot Lights with 380 VAC...575VAC require a control circuit transformer.
- ❷ Modifications may change dimension of starter enclosure.
- ❸ Emergency Stop pushbutton includes inscription ring D7-15YSE112. For other selections from page H68 refer to factory.

Modifications or Special Feature ⑤	ADD Suffix to Catalog Number	Enclosure Type	Controller Series and Price Addition							
			CA7-9 to 55	CA7-60 to 97	CA9-116(-EI) to CA9-146(-EI)	CA9-190(-EI) to CA9-370(-EI)	CA9-400-EI to CA9-750-EI	CA9-860-EI to CA9-1060-EI		
<b>Additional Auxiliary Contacts ⑥</b>										
1 N.O. 1 N.C.	L10  L01 	All	44.97	44.97	~	~	~	~		
1 N.O. & 1 N.C. 2 N.O. 2 N.C.	L11 L20 L02	All	53.97	53.97	74.61	74.61	74.61	74.61		
1 NO + 2 NC Auxiliary 2 NO + 1 NC Auxiliary 3 NO Auxiliaries 3 NC Auxiliaries	L12 L21 L30 L03	All	63.36	63.36	86.87	86.87	86.87	86.87		
2 N.O. & 2 N.C. 1 NO + 3 NC Auxiliary 3 NO + 1 NC Auxiliary 4 NO Auxiliaries 4 NC Auxiliaries	L22 L13 L31 L40 L04	All	74.61	74.61	115.49	115.49	115.49	115.49		
<b>Alternate Auxiliary Contact Arrangements</b> 1 N.C. in lieu of standard 1 N.O. (on CAT7) 2 N.C. in lieu of standard 2 N.O. (on CAUT7)	LX1 LX2	All	N/C 7.15	N/C 7.15	-	-	-	-		
<b>Control Circuit Transformer (with fused primary &amp; secondary)</b>										
	Primary Volts	Secondary Volts	Replace (*) in catalog # with following codes ②③							
Standard Capacity ⑥	208	120	XA	Type 1, 12, 3R, 4,4X Open	316.82	415.95	415.95	415.95	565.17	565.17
	240	120	XB 							
	480	120	XC 							
	600	120	XD 							
	380	110	XG 							
	240	24	XE	Type 7/9	316.82	415.95	415.95	415.95	565.17	565.17
	480	24	XF 							
	600	24	XJ 							
	380	24	XK							
	208	24	XO							
120	24	XP								
277	120	XY								
50 Watt Extra Capacity	208	120	XA05	Type 1, 12, 3R, 4,4X Open	407.78	505.89	~	~	~	~
	240	120	XB05							
	480	120	XC05							
	600	120	XD05	Type 7/9	407.78	505.89	~	~	~	~
	240	24	XE05							
480	24	XF05								
100 Watt Extra Capacity	208	120	XA1	Type 1, 12, 3R, 4,4X Open	498.74	622.40	622.40	622.40	840.08	840.08
	240	120	XB1							
	480	120	XC1							
	600	120	XD1							
	240	24	XE1	Type 7/9	498.74	622.40	622.40	622.40	840.06	~
	480	24	XF1							
	600	24	XJ1							
Special Voltage Transformer - Add suffix F/A to end of catalog # ① For applications requiring more than 100 Watt extra capacity				All, Open	Refer to Factory Refer to Factory					

### Ordering Instructions

Change base **Catalog Number** according to instructions in column 2.  
Example: To Add a Control Circuit Transformer (480/120) and additional NO/NC auxiliaries: change **CAT7-30-\***-◆-GO\_ to **CAT7-30-XC-◆-GO-L11**.

**Note:** Separate multiple modification suffixes with a hyphen (-).

- ① Factory assigned.
- ② Coil will be factory selected based on transformer secondary.
- ③ See page C112 for detail specifications for Control Circuit Transformer.
- ④ Refer to factory for pricing on larger oversized control circuit transformer selections.
- ⑤ Modifications may change dimension of starter enclosure.
- ⑥ Auxiliary addition is per contactor. Quantity is double for reversing applications. Double price adder accordingly.

Modifications or Special Feature ②	Power Supply					Replace (*) in catalog # with following codes	Enclosure Type	Controller Series and Price Addition			
	Rating (W)	Input V AC	Output V DC	Output Amps				CA7-9E to CA7-55E	CA7-60D to CA7-97D	CA9-116 to CA9-1060 ①	
				@ 40°C	@ 60°C						
<b>AC to DC Output Power Supplies</b>											
<b>1-Phase Standard Capacity (CA7-9E...55E)</b>											
Power Supply (with no CPT)	72	115	24	2	1.5	PS1P	Open All	362.81	~	①	
Power Supply (with no CPT)	72	230	24	2	1.5	PS1E		362.81			
Power Supply w/CPT @ 208 VAC Primary	72	115	24	2	1.5	PS1XA		679.63			
Power Supply w/CPT @ 230 VAC Primary						PS1XB		679.63			
Power Supply w/CPT @ 460 VAC Primary						PS1XC		679.63			
Power Supply w/CPT @ 575 VAC Primary						PS1XD		679.63			
<b>1-Phase Standard Capacity (CA7-60D...97D)</b>											
Power Supply (with no CPT)	336	115	24	14	10	PS4P	Open All	612.18	~	①	
Power Supply (with no CPT)	336	230	24	14	10	PS4E		612.18			
Power Supply w/CPT @ 208 VAC Primary	336	115	24	14	10	PS4XA		1028.13			
Power Supply w/CPT @ 230 VAC Primary						PS4XB		1028.13			
Power Supply w/CPT @ 460 VAC Primary						PS4XC		1028.13			
Power Supply w/CPT @ 575 VAC Primary						PS4XD		1028.13			
<b>1-Phase 90W Extra Capacity (CA7-9E...55E)</b>											
Power Supply (with no CPT)	120	115	24	5	4	PS2P	Open All	423.11	~	①	
Power Supply (with no CPT)	120	230	24	5	4	PS2E		423.11			
Power Supply w/CPT @ 208 VAC Primary	120	115	24	5	4	PS2XA		739.93			
Power Supply w/CPT @ 230 VAC Primary						PS2XB		739.93			
Power Supply w/CPT @ 460 VAC Primary						PS2XC		739.93			
Power Supply w/CPT @ 575 VAC Primary						PS2XD		739.93			
<b>2-Phase Standard Capacity (CA7-9E...55E)</b>											
Power Supply @ 230 VAC Primary	120	230	24	5	4	PS6B	Open All	450.70	~	①	
Power Supply @ 460 VAC Primary	120	460	24	5	4	PS6C		450.70			
<b>2-Phase Standard Capacity (CA7-60D...97D)</b>											
Power Supply @ 230 VAC Primary	336	230	24	7.5	5	PS7B	Open All	646.93	~	①	
Power Supply @ 460 VAC Primary	336	460	24	7.5	5	PS7C		646.93			
For applications requiring extra capacity on either device, please refer to factory								<b>Refer to Factory</b>			
<b>CR17E-*</b> Electronic Interface Module for use with CA7-9...CA7-97: Interface between the DC control signal from a PLC and the AC operating mechanism of the contactor. <ul style="list-style-type: none"> <li>Eliminates the need for a power supply-current draw is 10 to 15 mA across a voltage range of 12-48V DC</li> <li>Requires no additional surge suppression for the coils</li> <li>Must have output voltage 110...240V AC</li> <li>Add Suffix to end of catalog number: for example change <b>CAT7-30-*-◆-GO</b> to <b>CAT7-30-*-◆-GO-JE</b></li> </ul>						add Suffix to end of Catalog Number  -JE		Open All	93.00	93.00	①

**Factory Modifications**

**Ordering Instructions**

Replace \* in base **Catalog Number** with Power Supply code.  
 Example: To Add a Standard Capacity Power Supply with Control Circuit Transformer (480/120):  
 change **CAT7-30E-◆-GO** to **CAT7-30E-PS1XC-◆-GO**.

- ① Not applicable for Series CA9 Starters. CAT9 Starter applications should strongly consider the use of the "EI" functionality included in the CA9-116...1060-EI Contactors. The optional electronic interface selection allows the CA9 contactor to be switched from a PLC or other low-level signal source (15...33V DC) without the need of an interposing relay. The current burden of the interface is 15 mA maximum.
- ② Modifications may change dimension of starter enclosure.



Modifications or Special Feature ⑦	ADD Suffix to Catalog Number	Enclosure Type	Controller Series and Price Addition			
			CA7-9 to 55	CA7-60 to 97	CA9-116(-EI) to CA9-146(-EI)	CA9-190(-EI) to CA9-370(-EI)
<b>Other modifications</b>						
<b>Fused Control Circuit</b> for separate or common control ⑥						
- 1 Fuse	F1	All, Open	107.31		107.31	
- 2 Fuses	F2	All, Open	137.97		137.97	
Surge Suppressor - RC Link	RC	All, Open	41.90		82.78	
Surge Suppressor - Varistor	RV	All, Open	41.90		82.78	
Surge Suppressor - Diode	RD	All, Open	41.90		~	
<b>Unwired Terminal Blocks</b> Specify quantity (▼).	- ▼TB	All	21.46 x ▼			
<b>Control Relay</b> Limited to one per controller-8 pole maximum, Specify pole arrangement and voltage ⑤	F/A ①	All, Open	546.77			
<b>Timing Relay</b> Limited to one per controller-specify "On" or "Off" delay. Voltage will be same as coil voltage	F/A ①	All, Open	729.71			
Compelling Relay ② ⑤	F/A ①	All, Open	572.32			
Progressive or Decelerating Relay ② ⑤	F/A ①	All, Open	1325.53			
Omit Automatic Alternator ③	F/A ①	All, Open	497.71			
Back Spin Timer ④	F/A ①	All, Open	663.28			
Program Timer (24 hour) ④	F/A ①	All, Open	704.16			
<b>Fireman Damper Control Option</b>						
HVAC Enclosed Starter Fireman Damper Option - 24 VAC/DC - 120 VAC/DC	FD24 FD120	Type 1	Non-Combination	494.65	741.97	Refer to Factory
			Fusible	741.97	494.65	
			Non-Fusible	741.97	494.65	
			Thermal Magnetic	741.97	494.65	
		Type 3R	Non-Combination	494.65	741.97	
			Fusible	494.65	494.65	
			Non-Fusible	494.65	494.65	
			Thermal Magnetic	494.65	494.65	

### Ordering Instructions

Change base catalog number according to instructions at top of column 2 or 3.  
**Example:** To Add a "Start-Stop" Pushbutton, Control Circuit Transformer (480/120) and RC Link: change **CAT7-30-\***-◆-G0 to **CAT7-30-XC-◆-G3-RC**.  
**Note:** Separate multiple modification suffixes with a hyphen (-).

- ① Factory assigned.
- ② For Multi-speed controllers.
- ③ For Duplex Pump controllers.
- ④ For Pump Panel controllers.
- ⑤ If controller has a Control Circuit Transformer, select transformer with additional capacity for relay required.
- ⑥ CPT and power supply modification includes fused control circuit protection.
- ⑦ Modifications may change dimension of starter enclosure.

Modifications or Special Feature ③	ADD Suffix to Catalog Number	Enclosure Type	Controller Series and Price Addition					
			CA7-9 to 55	CA7-60 to 97	CA9-116(-EI) to CA9-146(-EI)	CA9-190(-EI) to CA9-370(-EI)	CA9-400-EI to CA9-750-EI	CA9-860-EI to CA9-1060-EI
<b>Meters</b>								
Ammeter - Single Phase	AM1	All, Open	Refer to factory					
Ammeter - Three Phase (includes switch)	AM3							
Voltmeter - Single Phase	VM1							
Voltmeter - Three Phase (includes switch)	VM3							
Wattmeter	WM							
Elapsed Time Meter	ETM							
<b>Enclosures</b>								
Space Heater (with N.C. interlock)	HTR	Type 1, 12, 3R, 4, 4X	604.00					
Breather and Drain	BD	Type 7/9	149.21					
Service Identification Nameplate	F/A ①	All	33.73					
<b>Miscellaneous</b>								
Lightning Arrester ②	LA	All, Open	354.63					
Surge Capacitor ②	SC		433.33					
Phase Monitor Relay	F/A ①		497.71					
UL508A Panel Label	UL	Type 1, 12, 3R, 4, 4X	51.10					
UL1203 Panel Label (includes 508A)	ULX	Type 7/9	Refer to factory					

**Factory Modifications**

Panel Shop Certifications
<p><b>Sprecher + Schuh is an ISO9001 company. Our panel shops are UL and ATEX Certified.</b></p> <p><b>Please refer to factory for specifications and label options for the following panel certifications.</b></p>
<p><b>UL508A or SUSE label:</b> Most starter assemblies can be supplied with a UL508A 'Industrial Control Panel' label. Combination starters can be supplied with Suitable for Service Entrance (SUSE) label. The need for a UL508A or SUSE label must be identified at the time of quotation as well as on the purchase order. The need for a UL508A label may not change the components we would normally use but we must consider all possible requirements at the time we are developing the bill-of-material to be referenced at the time of order entry. Failure to identify the need for a UL508A label or SUSE label at the time of quotation may result in change notice price adders.</p>
<p><b>ATEX Certification:</b> A requirement for ATEX certification MUST be identified at the time of quotation as well as on the purchase order. ATEX certification of a Type 7/9 explosion proof enclosure definitely requires all conduit and cover openings to be drilled by the enclosure manufacturer. Further, all pilot devices and equipment to be installed must be identified as it controls the heat dissipation which is an ATEX certification requirement. Absolutely no field modification of an ATEX certified starter assembly is allowed. Failure to identify the need for an ATEX certification at the time of quotation and order entry may result in 100% cancelation or re-stocking charge since a new enclosure will be required.</p>
<p><b>UL1203 Certification:</b> The UL1203 label for explosion proof starters and panels encompasses the UL508A certification. This means all components in a UL1203 labeled panel must first comply with UL508A, and all components in the panel must have a UL label in some form, including the wiring. A special name plate and UL508A label are applied to the panel or starter. A panel is not UL1203 certified unless both label and name plate are present. Contact customquotes@sprecherschuh.com for more information on UL1203 certified panels.</p>

### Ordering Instructions

Change base catalog number according to instructions at top of column 2.  
**Example:** To add an Elapsed Time Meter and Breather Drain to an explosion-proof starter, change **CAT7-30-\*-◆-E0** to **CAT7-30-\*-◆-E0-ETM-BD**.  
**Note:** Separate multiple modification suffixes with a hyphen (-).

- ① Factory assigned.
- ② For Pump Panel controllers.
- ③ Modifications may change dimension of starter enclosure.